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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,783	07/09/2001	Brian Fudge	990452	9313

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Qualcomm Incorporated  
Patents Department  
5775 Morehouse Drive  
San Diego, CA 92121-1714

EXAMINER

KOSTAK, VICTOR R

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 04/28/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/901,783

**Applicant(s)**

FUDGE ET AL.

**Examiner**

Victor R. Kostak

**Art Unit**

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 and 49-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 and 49-55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. Applicant's election without traverse of group I in Paper No. 8 is acknowledged.
2. Claims 2-5, 17-20 and 49-52 are objected to because of the following informalities:
  - i) "the moving image" recited in parallel claims 2 and 17 lacks antecedent basis. The examiner has assumed, for examining purposes, that it is the same signal as "an image" that is stored, recited in respective base claims 1 and 16; and
  - ii) "the means for defining" recited in line 6 of claim 49 also lacks antecedent basis, and appears to correspond to the means for selecting. Appropriate correction is required.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 lacks antecedence for "the state machine", suggesting that the dependency is not correct. It is not clear which claim was intended as the base claim since any of claims 8-12 would qualify. It has been treated as if dependent from claim 8 which first introduces a state machine, thereby giving it broadest scope.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Or (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6, 7, 16, 21-23 and 49-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Gray et al.

The video convertor of Gray (noting particularly Figs. 1 and 4) includes first storing digitized video data (e.g. col. 6 lines 25-28 and lines 32-42) in memory 29; a parameter list (corresponding to the claimed format data table) that defines a set of parameters for each of a plurality of different formats from which templates (or scripts) are created defining specific formats (col. 7 lines 4-7 and 15-43); an image processor (graphics engine 18: col. 12 lines 44-54) reads the data from memory 29 according to the template data comprising the parameters for the desired output format for eventual display on a monitor (output of terminal 38), thereby meeting claims 1, 16 and 23.

As for claim 6 and 21, Gray points out that his system can be used for converting any specialized non-standard image format into a video standard or other non-standard format (col. 1 lines 44-49), and mentions that his system can be used to reformat medical images and still (static) frame images (lines 30 and 52-53 of col. 1), thereby expressly allowing for still or static imagery to be displayed. The display of the still/static imagery would inherently be displayed continuously (rather than for a period of a single frame of a known standard, such as 1/30<sup>th</sup> second if an NTSC format) since medical imagery cannot be presented briefly, instead displayed for plural frame periods extending well beyond the single 1/30<sup>th</sup> of a second.

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As for claims 7 and 22, Gray mentions using software for his drafting his template parameters (col. 5 lines 39-42).

Regarding claims 49 and 53, the storing and reading features have been addressed above. The selecting feature is carried out by the operator by interfacing with the system microprocessor using keyboard 12. The claimed processing means reads on the sync out stage 33 used to display the converted video data in presentable form.

As for claims 50 and 54, the means coupled to the processing means and responsive to the control data is the ultimate monitor unit.

As for claims 51 and 55, the control data is defined during the template/script creating stage, for the purpose of applying the proper converted sync parameters (e.g. col. 6 lines 63-68; col. 7 lines 15-43).

Considering claim 52, the display format selection operation is programmable (noting microprocessor-controlled graphic engine, using software from system memory 14).

5. Claims 1-5, 16-20, 24 and 34-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Donovan.

Donovan also converts an input signal having a first format into an output signal of a second-format (noting particularly Figs. 11, 15, 16 and 22), his arrangement including plural-line stores 1 and 2 (Fig. 11) for digital data (col. 51-61). A mode selection input to control 120 provides settings from a table 212 to a scan rate convertor (shown sent to SRC element 206 in Fig. 15), and parameter table data from unit 204 is also sent to SRC unit 206 for selection of format conversion settings to be applied to the stored digital data. A conversion equation is

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determined based on the input signal parameters and the desired output signal format parameters, and the equation is applied to the stored data (col. 11 line 30 + describing one mode). Processors ALU 308 (for example, shown in the Fig. 16 embodiment) operate on the stored data read out from line memories under the control of controller 320 to which parameter data is applied as mode data. The read out processed data is in turn sent to encoder 130 (210 in Fig. 15) for presentation on a television display, thereby meeting claims 1 and 16.

As for claims 24 and 34, the claimed control data reads on the clock data listed, for example, in Parameter Table 2.

As for claims 2 and 17, the line stores accommodate digital data for a plural series of image frames, lines at a time, ultimately providing a converted sequence of image frames.

Regarding claims 3 and 18, the format table includes progressive scan format data (identifying the VGA parameters), and the stored line data is presented in display order (i.e. the sequence applied to the ALU processors in the order the lines will ultimately be displayed).

As for claims 4 and 19, the ALU processors output data in a different format from which the lines are first stored, namely in a converted (scaled) format).

Considering claims 5 and 20, the format table also includes interlaced parameters for the purpose of converting the eventually displayed imagery in NTSC or PAL modes (noting col. 11 line 30+ describing factors used to form television formatted data).

As for claim 35, element 100 receives image data defining a multiplicity of image data in a decimated format (from element 96).

As for claim 36, respective components (i.e. UV and Y components) are received in parallel by unit 100.

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Regarding claims 37-39, the control data involves sync data for both the vertical and horizontal blanking (the converted displayed imagery being in television format).

As for claim 40, blank pixels will be formed in the scaling format where the output size is smaller than the input size.

6. Claims 24-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakamoto et al.

Nakamoto (noting particularly Figs. 1-5) also converts an image having a first input format into an output image having a different format, wherein image data from VRAM 2 (Fig. 2) is passed to storage units 3; table 7 which stores programmable format data so selected by mode data applied thereto; and a generating unit 4 (detailed in Fig. 4) processes the data output from VRAM 2 according to the table data and control data (clock/sync data) shown by elements 22 and 23 in Figs. 4 and 5, thereby meeting claim 24.

As for claims 25 and 26, the storage units are buffers that function as FIFOs since single lines are sequentially written in thereto.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 8-14, 24 and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eitzmann et al. in view of Nakamoto et al.

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Eitzmann also converts an image format into another by first generating a table of selectable parameters constituting multiple files 100 defining respective formats (noting Fig. 1); a compiler 102 for storing the tables containing respective sets of parameters; and a state machine (Fig. 5) to which the video output formatter 104, based on a selected format, converts a video sequence to a desired format, the control data reading on the sync data used for conversion (e.g. col. 3 lines 7-33).

Although Eitzmann does not describe any initial image storage, it would have been clearly obvious to provide at least some minimal amount of storage to enable the format converting state machine to count out the data for conversion, noting the arrangement of the state machine in Fig. 5, such as at least a line buffer, which is very well known, and as shown by Nakamoto, and in the same field of endeavor. Eitzmann in fact mentions a video frame shown in Fig. 4 to be applied to the state machine, and though not specifically discussing storage, line counting is used (col. 7 line 9+), thereby meeting claims 1, 8, 24 and 29.

As for claims 9-12 and 30-33, horizontal and vertical intervals are generated (noting col. 3 lines 7-33), as well as blank pixels (col. 7 lines 9-13 describing blank portions of the frame shown in Fig. 4).

As for claims 13 and 14, it would have been obvious to provide some minimal amount of buffering, as explained above, such as the FIFO-type used by Nakamoto, which accordingly processes the incoming data in reception order, buffering generally used for smoothing out data transfer processes.



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8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over either one of Gray et al. or Donovan, in view of Eglit.

It would have been clearly obvious to display the converted imagery of Gray or Donovan on any suitable display device such as a standard CRT, LCD, or projector, all of which are well known. Gray neither specifies nor limits his display device (noting col. 12 lines 60-64 and col. 13 lines 13-15). Donovan states certain conditions "*when displayed on a TV*" (col. 41 lines 28-30), suggesting to one of ordinary skill in the art that other devices may be usable.

In view of the fact that Eglit also discloses converting an input format into a different output format and points out that his conversion can incorporate any type of display including a CRT and a projector (col. 18 lines 45-49).

In view of this explicit teaching, it would have been obvious to use any type of display device in the convertors of Gray or Donovan for the clear purpose of accommodating the operator with selectable display options, as is typically desired.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references used in the rejections above could also have been applied against other already rejected claims, but were not in an effort to minimize repetition. It is further pointed out that the additionally cited references could also have been applied in a rejection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor R. Kostak whose telephone number is 703 305-4374. The examiner can normally be reached on Monday - Friday from 6:30am-3:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 703 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Any response to this action should be mailed to:**

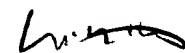
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**Or faxed to:**

**(703) 872-9306 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 308-HELP.



Victor R. Kostak  
Primary Examiner  
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VRK